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--Furthermore, this invention also concerns a method of producing such fibers comprising the sequential steps of a) extruding a heated formulation of polypropylene comprising at most about 2000 ppm, preferably at most about 1500 ppm, more preferably at most about 1000 ppm, and most preferably below about 800 ppm, of a nucleator compound into a film or tube; b) immediately quenching the film or tube of step "a" to a temperature which prevents orientation of polypropylene crystals therein; c) slitting said film or tube with cutting means oriented longitudinally to said film or tube thereby to produce individual tape fibers therefrom; d) mechanically drawing said individual tape fibers at a draw ratio of at least 5:1 while exposing said fibers to a temperature of at between 250 and 360°F, preferably between 260 and 330°F, and most preferably between 270 and 300°F, thereby permitting crystal orientation of the polypropylene therein. Preferably, step "b" will be performed at a temperature of at most 95°C and at least about 5°C, preferably between 5 and 60°C, and most preferably between 10 and 40°C (or as close to room temperature as possible for a liquid through simply allowing the bath to acclimate itself to an environment at a temperature of about 25-30°C). Again, such a temperature is needed to ensure that the component polymer (being polypropylene, and possibly other polymeric components, such as polyethylene, and the like, as structural enhancement additives therein that do not appreciably affect the shrinkage characteristics thereof) does not exhibit orientation of crystals. Upon the heated draw step, such orientation is effectuated which has now been determined to provide the necessary rigidification of the target tape fibers and thus to increase the strength and modulus of such fibers. The drawing speed to line speed ratio should exceed at least five times that of the rate of movement of the film to the cutting means.

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Preferably, such a drawing speed is from 400-700 feet/minute, while the prior speed of the film to the cutting means from about 50-400 feet/minute, with the drawing speed ratio between the two areas being from about 3:1 to about 10:1, and is discussed in greater detail below, as is the preferred method itself. The final heat-setting temperature is necessary to "lock" the polypropylene crystalline structure in place after extruding and drawing. Such a heat-setting step generally lasts for a portion of a second, up to potentially a couple of minutes (i.e., from about 1/10th of a second, preferably about ½ of a second, up to about 3 minutes, preferably greater than ½ of a second). The heat-setting temperature must be well in excess of the drawing temperature and must be at least 265°F, more preferably at least about 290°F, and most preferably at least about 300°F (and as high as 380°F). The term "mechanically drawing" is intended to encompass any number of procedures which basically involve placing an extensional force on fibers in order to elongate the polymer therein. Such a procedure may be accomplished with any number of apparatus, including, without limitation, godet rolls, nip rolls, steam cans, hot or cold gaseous jets (air or steam), and other like mechanical means.--

The paragraph beginning on page 17 just below the heading "Detailed Description of the Drawing and of the Preferred Embodiment, has been replaced with the following:

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--FIG. 1 depicts the non-limiting preferred procedure followed in producing the inventive low-shrink polypropylene tape fibers. The entire fiber production assembly **10** comprises a mixing manifold **11** for the incorporation of molten polymer and additives (such as the aforementioned nucleator compound) which then move into an extruder **12**. The extruded

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polymer is then passed through a metering pump **14** to a die assembly **16**, whereupon the film **17** is produced. The film **17** then immediately moves to a quenching bath **18** comprising a liquid, such as water, and the like, set at a temperature from 5 to 95°C (here, preferably, about room temperature). The drawing speed of the film at this point is dictated by draw rolls and tensionsing rolls **20, 22, 24, 26, 28** set at a speed of about 100 feet/minute, preferably, although the speed could be anywhere from about 20 feet/minute to about 200 feet/minute, as long as the initial drawing speed is at most about 1/5th that of the heat-draw speed later in the procedure. The quenched film **19** should not exhibit any appreciable crystal orientation of the polymer therein for further processing. Sanding rolls **30, 31, 32, 33, 34, 35**, may be optionally utilized for delustering of the film, if desired. The quenched film **19** then moves into a cutting area **36** with a plurality of fixed knives **38** spaced at any distance apart desired. Preferably, such knives **38** are spaced a distance determined by the equation of the square root of the draw speed multiplied by the final width of the target the final width of the target fibers (thus, with a draw ratio of 5:1 and a final width of about 3 mm, the blade gap measurements should be about 6.7 mm). Upon slitting the quenched film **19** into fibers **40**, such fibers are moved uniformly through a series of nip and tensioning rolls **42, 43, 44, 45** prior to being drawn into a high temperature oven **46** set at a temperature level of between about 280 and 350°F, in this instance about 310°F, at a rate as noted above, at least 5 times that of the initial drawing speed. Such an increased drawing speed is effectuated by a series of heated drawing rolls **48, 50** (at temperatures of about 360-400°F each) over which the now crystal-oriented fibers **54** are passed. A last tensioning roll **52** leads to